Frequently asked questions

What is the purpose of this change? Our street system is one of the City's largest asset impacting every citizen, employee, emergency service personnel, commuter, and visitors. Its condition affects our quality of life, efficiency, timely response, national ranking, and benchmarks. There is a need to improve the overall condition of our streets. The proposed amendments will encourage good planning, improve communication, improve notification to the City, improve aesthetics and reduce the degradation to our streets. Utility cuts are degrading our infrastructure at an unsustainable rate. Improved standards will add a layer of protection the current ordinance does not.

How many excavation permits are issued? In 2013, 985 excavation permits were issued and 720 in 2014 as of September 2014. Most permits are obtained on a "per block" basis, meaning that more than one cut is included. Starting July 1, 2015 a permit will be required per cut.

How do these changes compare to the State's requirements(NCDOT)? NCDOT requires that utilities be installed outside the roadway to the maximum extent practicable. Their preference is for it to be in the last 5 feet of right-of-way. When they allow their road to be cut it will have to be repaired with 8"-9" of full depth asphalt on primary roads and 6" on secondary roads. The overlay shall be a minimum of lane width and existing patch areas may be required to be included. If the crown is impacted it shall be restored. A 1 ft milling is required for a smooth transition. A bond is required for road improvement and retained for a year after the work is completed.

How does it compare to other municipalities? Our proposed changes get closer to the requirements in other municipalities such as Wilmington, Greensboro, Raleigh, Durham and Charlotte, however less restrictive. Ours provide the option of flowable fill when others require it; ours allow restoration by their crews while others require it to be completed by City crews; others require crews performing backfilling and restoration to be certified by form of training conducted by the municipality on proper methods, equipment and materials; others require resurfacing for roads with a rating of 50 out of 100 or greater; others will not accept new roads until the lots are at least 75% occupied, a final inch of asphalt installed and one year of warranty expired. This last one is comparable to NCDOT requirement.

What happens to a utility that is not in compliance with a provision of the ordinance? No additional permits will be issued until in compliance.

Who will be responsible for the compaction testing? The permittee will be required to secure the testing following City's standard. Testing results are to be provided to the City prior to proceeding with the next step.

When will these changes be effective? It is recommended that the effective date for the amendment be July 1, 2015 to allow impacted parties to account for additional cost as part of their budget process, including ourselves (i.e. operations related to storm drainage and signal loops).

Would this amendment require utilities to be installed out of the road? No, that is not the intent of this amendment. Our intent is to add a layer of protection to our asset while it is impacted by utility operations. Permittees may elect to install new utilities outside the roadway as part of their operations moving forward to avoid the requirements of the ordinance however it is a decision made solely by the permittee.

Would this amendment require streets to be resurfaced as part of utility? Any street that is degraded 25% or greater between intersections shall be resurfaced with a minimum of 1-½ inch of asphalt for the entire length between intersecting streets.

What is excavatable flowable fill (EFF)? It is a self-compacting low strength material with a flowable consistency that is used as an economical fill or backfill material as an alternate to compacted granular fill. EFF a blend of Portland cement, fine aggregate, water, and admixtures delivered in a ready mix truck. Flowable fill is not concrete nor is it used to replace concrete. Flowable fill was initially developed over 20 years ago as a solution to reoccurring problems originating from poorly compacted soil or granular fill. (National Ready Mixed Concrete Association).

What are the benefits to use EFF?

1. Improved safety – Does not require workers to enter an excavation
2. Reduced size of excavation – Does not require manual compaction, trench width or the size of excavation is significantly reduced.
3. No in-service settlement -utility cut patches do not sink producing roadway hazards. Hardens to a degree that precludes any future trench settlement.
4. Can be removed with conventional excavating equipment -no jack hammering
5. Fast return to traffic
6. Fast placing
7. Negates the need for placing the 6-inch lifts and eliminate the need of in-place soil test
8. Fast setup time
9. Extra cost for the material, compared to a compacted backfill, is offset by the fact that it eliminates the costs for compaction and labor, reduces the manpower required for close inspection of the backfill operation, requires less trench width, and reduces the time period and costs for public protection measures.
10. Stronger and more durable than compacted soil or granular fill
11. Self-compacts consistently and does not need extensive field testing
12. Reduces equipment needs
13. Fly ash contained in the mix benefits the environment by making use of this industrial waste by-product.

Is EFF readily available? Local ready mix companies provide an NCDOT EFF mix that can be easily produced with short notice in most cases.

Will there be a bond requirement with flowable fill? No

Would the inspection criteria for flowable fill be different? No. The inspection criteria will be the same

as for soil backfill with the difference that the testing is not needed. The mix design will need to be reviewed and approved before ordering.

What are the options as related to warranty for the excavation repair?

1. Install soil backfill in accordance with City standard. Permittee shall warrant its work until the road is re-surfaced.
2. Install soil backfill in accordance with City standard along with compaction testing. Permittee shall warrant its work for three years.
3. Install EFF instead of soil backfill from the invert to the base layer elevation. Permittee shall warrant its work for a year.

What is the cost difference between current practice, soil backfill, and the EFF for repairs to city streets? Below is a basic analysis for pavement excavations in City streets. City's cost for equipment and salary was used in the calculation. A cost of $ 80 a cubic yard (2 yard minimum)for the EFF using NCDOT specs was confirmed with a local supplier that agreed to hold the price for a year. It appears there could be substantial saving with smaller cuts and marginal saving in the larger cuts. In the end, the savings would vary based on the size, depth and complexity of the roadway cut. Based on recent research with other municipalities, the use of flowable fill has provided a cost saving in all cases when evaluated in a long term basis and not just initial cost.

EXCAVATION 5'X5'X5' STANDARD

	QUANTITY	UNITS	TOTAL
1 Equipment Operator III	3.5	20.77	$73
3 Equipment Operators II	3.5	57.45	$201
1 F-450 Truck	3.5	30.00	$105
1 Mini- excavator	3.5	39.00	$137
1 Single axle dump truck	3.5	45.00	$158
6 ton transport trailer	3.5	10.25	$36
1 Quickie Saw	3.5	6.00	$21
1 Jumping Jack Tamp	3.5	10.00	$35
4.0 Cubic Yards of Sand Clay	4	21.00	$84
1.8 Cubic Yards of ABC Stone	1.8	23.75	$43
Compaction Testing	LS	400.00	$400
Asphalt Patch	LS	140.00	$140
Asphalt Patch Repair	LS	140.00	$140
		Total	$1,571

EXCAVATION 2'X2'X5' STANDARD

	QUANTITY	UNITS	TOTAL
1 Equipment Operator III	3	20.77	$62
3 Equipment Operators II	3	57.45	$172
1 F-450 Truck	3	30.00	$90
1 Mini- excavator	3	39.00	$117
1 Single axle dump truck	3	45.00	$135
6 ton transport trailer	3	10.25	$31
1 Quickie Saw	3	6.00	$18
1 Jumping Jack Tamp	3	10.00	$30
4.0 Cubic Yards of Sand Clay	0.74	21.00	$16
1.8 Cubic Yards of ABC Stone	0.8	23.75	$19
Compaction Testing	LS	400.00	$400
Asphalt Patch	LS	35.20	$35
Asphalt Patch Repair	LS	35.20	$35
		Total	$1,160

EXCAVATION 5'X5'X5' FLOWABLE FILL

	QUANTITY	UNITS	TOTAL
1 Equipment Operator III	1.5	20.77	$31
3 Equipment Operators II	1.5	57.45	$86
1 F-450 Truck	1.5	30.00	$45
1 Mini- excavator	1.5	39.00	$59
1 Single axle dump truck	1.5	45.00	$68
6 ton transport trailer	1.5	10.25	$15
1 Quickie Saw	1.5	6.00	$9
Flowable Fill	13.5	80.00	$1,080
Asphalt Patch	LS	140.00	$140
		Total	$1,533

EXCAVATION 2'X2'X5' FLOWABLE FILL

	QUANTITY	UNITS	TOTAL
1 Equipment Operator III	1.5	20.77	$31
3 Equipment Operators II	1.5	57.45	$86
1 F-450 Truck	1.5	30.00	$45
1 Mini- excavator	1.5	39.00	$59
1 Single axle dump truck	1.5	45.00	$68
6 ton transport trailer	1.5	10.25	$15
1 Quickie Saw	1.5	6.00	$9
Flowable Fill	1	80.00	$80
Asphalt Patch	LS	35.20	$35
		Total	$428

Is a utility required to pay degradation fees for work completed in advance of City resurfacing? Typical practice has been to renew services immediately prior to the City resurfacing. The current practice to waive the degradation fee will continue for activities in preparation of resurfacing. A separate permit will be required per cut instead of per block.

If a utility is doing lateral renewals immediately ahead of City street resurfacing do the patching limit templates in Section 24-56 apply or can the cut be patched as is and the patch not extended curb to curb, to encompass other patches, etc.? The patching limit templates will not apply to activities in preparation of resurfacing.

What process and procedures will the City follow to track the excavation permits and their location? The permitting software called City Works. ***Will this be mapped such that it is available for review or distribution?*** Not at this time.

If a developer or developer's contractor obtain an excavation permit to install utilities in the City street and a problem is encountered with the patch down the road, who will be the responsible party for that patch, the entity that obtained the excavation permit or the utility owner? The utility owner.

Section 24-56 Restoration Requirements – This section states that the City shall specify the area to be restored and the methods and materials to be used for the restoration. Will the City provide direction on every cut of the exact area to be restored, the methods to be used, and the materials to be used? Or will this be based on the guidance from Ch. 24 and the City's standard details. Restoration shall be performed in accordance with City standards, details and guidance provided in this article. An inspector will be available for further guidance as needed.

Section 24-56 – States that EFF may be used (with City Engineer's approval) from the invert to the base layer elevation. Some utilities have a standard that require select bedding material from a minimum of 4" below the invert up to the midpoint of the pipe (Diameter/2). Will the flowable fill be allowed to begin at the midpoint of the pipe (Diameter/2) and go to the base layer elevation? Yes, it will be an allowable option.

Section 24-56 – States that "in the discretion of the City Engineer, the warranty period MAY be reduced to one year if EFF is used". Will the warranty period be reduced to one year every time flowable fill is used as the backfill material? Yes, as long as the approved EFF mix is used and installed per City standards

Section 24-60 – Pipe Abandonment – Will abandonment be allowed by plugging and grout filling as an alternative to complete removal of the pipe? The language in the amendment says that the City Engineer MAY allow plugging and grout filling in the event that removal is not feasible. The removal of an abandoned utility is to be the main practice. Plug and grout may be allowed in a case-by-case basis with the appropriate information provided to justify the method.

Section 24-72 – If a new patch results in the cumulative patch area total to exceed 25% of a section of street from intersection to intersection, will the other areas of that section of street that are in need of

repair be repaired by the City prior to overlay? Failed patches will be the responsibility of the utility. Additional needed repairs due to use and aging will be repaired by the City.

Section 24-75 – Does the applicant still submit an excavation permit and the City determines and advises if the street has been paved in the last 36 months? A list of streets will be prepared and provided to the utilities for review prior to requesting a permit. Permits will not be issued if resurfaced in less than 36 months unless an exemption is granted.

Section 24-75 - In an emergency what steps should be taken to coordinate with the City Engineer and gain approval for cutting the street to make a repair? The Utility will have to respond quickly depending on the nature of the emergency and it could be after business hours. Excavation permits along with supporting documentation shall be provided the next business day. The utility will be assessed 5 times the degradation fee. Good planning is highly encouraged to avoid emergencies.

Section 24-75 – States that justification must be provided for why an installation would need to take place in a new pavement structure and could not be done by another means that would not require excavation in the public right of way. A Utility would look for alternative ways to serve sites in this scenario, but it could be that the utility could not serve the site in an acceptable manner without cutting the pavement. Would making installations per the utility's standards and specifications be sufficient justification for cutting the new pavement? No, "acceptable manner" could be diversely defined. It will be considered on a case-by-case basis.

Has the fee schedule been finalized? No

Would every utility and entity performing excavation in the right-of-way be held to the same patching and resurfacing requirements as the other utilities? Yes

What are the compaction testing guidelines and frequency? Are these published already? Standard details and technical specification and currently been drafted.

If multiple cuts are being made on the same street in close proximity to one another is compaction testing required on each separate cut? Yes. A separate permit per cut will also be required.

Some contracts are bid as renewable annually and are good for multiple years. Some have been bid last fall. These contracts did not include the new requirements as they were bid prior to the effective date of the new changes. Will the changes apply to these contracts since they were locked in prior to the effective date? Yes

Who is responsible for calculating the 25% cumulative patch area? The City.

Is there an appeals process? Sec. 24-61 (c)

In several locations, the ordinance refers to the City Engineer making determinations regarding the use of steel plates, allowing cuts in recently resurfaced streets, etc. What is the lead time for requesting those determinations? Every time the designation "City Engineer" is used, means the City Engineer or his designee which include the engineering inspector assigned to excavations.